

WHAT IS CLAIMED IS:

- 1 1. A gas mixer for use in an engine system, comprising:
2 a venturi defining a flow area that decreases from an inlet opening to a throat, the
3 throat coinciding with a minimum flow area of the venturi; and
4 a gas delivery body in the flow area extending transverse to a longitudinal axis of the
5 venturi and positioned between the throat and the inlet opening, the gas delivery body
6 adapted to introduce gaseous flow into the venturi at a trailing edge thereof opposite the
7 inlet opening, the trailing edge of the gas delivery body substantially coinciding with the
8 throat.
- 1 2. The gaseous mixer of claim 1 further comprising at least one gas delivery outlet on the
2 trailing edge that substantially coincides with the throat.
- 1 3. The gaseous mixer of claim 1 wherein the venturi extends along a longitudinal axis and
2 the at least one gas delivery outlet is oriented to direct flow out of the gas delivery outlet
3 substantially parallel to the longitudinal axis.
- 1 4. The gaseous mixer of claim 1 wherein the at least one gas delivery outlet is directed
2 downstream.
- 1 5. The gaseous mixer of claim 1 wherein the gas delivery body has a continuous,
2 unapertured leading edge opposite the trailing edge.
- 1 6. The gaseous mixer of claim 1 wherein the at least one gas delivery outlet is adapted to
2 meter flow of gaseous fuel in relation to a flow of fluid through the venturi.
- 1 7. The gaseous mixer of claim 1 wherein a cross section of the gas delivery outlet is
2 substantially airfoil shaped.
- 1 8. The gaseous mixer of claim 1 wherein the gas delivery body has a first and second
2 members extending transverse to the longitudinal axis of the venturi, the first member
3 angularly displaced from the second member.

- 1 9. The gaseous mixer of claim 1 wherein the gaseous flow is at least one of a fuel and
- 2 exhaust.

1 10. An internal combustion engine system, comprising:

2 an engine; and

3 a venturi in an inlet of the engine, the venturi defining a flow area that decreases to a
4 smallest flow area at a throat of the venturi, the throat defining a boundary between an
5 upstream and downstream portion of the venturi; and

6 a gas delivery body in the venturi, the gas delivery body having a trailing edge with at
7 least one gas delivery outlet therein adapted to introduce gaseous flow into the venturi,
8 the trailing edge being positioned substantially outside of the downstream portion.

1 11. The internal combustion engine system of claim 10 wherein the venturi extends along a

2 central axis and the at least one gas delivery outlet is oriented to direct flow out of the gas
3 delivery outlet substantially parallel to the central axis.

1 12. The internal combustion engine system of claim 10 wherein the gas delivery body has a

2 leading edge opposite the trailing edge that is free of apertures.

1 13. The internal combustion engine system of claim 10 wherein the at least one gas delivery

2 outlet is adapted to meter flow of gaseous flow in relation to a flow of fluid through the
3 venturi.

1 14. The internal combustion engine system of claim 10 wherein a cross section of the gas

2 delivery body is substantially teardrop shaped.

1 15. The internal combustion engine system of claim 10 wherein the gas delivery body is

2 configured in a cross pattern.

1 16. The internal combustion engine system of claim 10 wherein the gaseous flow is at least

2 one of a fuel and exhaust.

- 1 17. A method of mixing gaseous fuel and air, comprising:
2 receiving a flow of air through a venturi, the venturi having a smallest flow area
3 through the venturi at a throat;
4 receiving gaseous fuel through an interior of a fuel flow body upstream of the throat;
5 and
6 receiving the gaseous fuel from the fuel flow body into the flow of air substantially at
7 the throat.
- 1 18. The method of claim 17 wherein receiving the gaseous fuel from the fuel flow body into
2 the airflow comprises receiving the gaseous fuel flowing out of the fuel flow body
3 substantially parallel to the airflow.
- 1 19. The method of claim 17 wherein introducing gaseous fuel into the airflow comprises
2 metering the amount of gaseous fuel in accordance with the airflow.